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UNITED STATES DEPARTMENT OF AGRICULTURE
Rural Electrification Administration
Technical Standards Committees
(Electric)

Supplement No. 2, January 1979, to
REA Bulletin 43-5
LIST OF MATERIALS ACCEPTABLE FOR USE ON
SYSTEMS OF REA ELECTRIFICATION BORROWERS

The attached pages for the "List of Materials Acceptable for Use on Systems of REA Electrification Borrowers" are those which have been revised by action of the Technical Standards Committees during the months of October through December 1978. The following changes should be made in order to keep it up to date. Pages with a colon between are on the same sheet, both being changed.

<u>Add</u> <u>New Page</u>	<u>Remove</u> <u>1978 Page</u>	<u>Add</u> <u>New Page</u>	<u>Remove</u> <u>1978 Page</u>
k-1	k-1	eq(1.1)	eq(1.1)
u-1	u-1	es	es
w	w	ga(1)	ga(1)
z-6	z-6	ga(2)	-
ai-1	ai-1	gg	gg
ai-3	ai-3	se	se
an-1.2	an-1.2	U an-1.1:U an-1.2	U an-1.1:U an-1.2
an-2.2	an-2.2	U an(1)	U an(1)
an-3.2	an-3.2	U an(2):U an(3)	U an(2):U an(3)
an(2.3)	an(2.3)	U gk(1.2)	U gk(1.2)
an(3.4):an(5.1)	an(3.4):an(5.1)	U hb(1)	U hb(1)
bj	bj	U hc	U hc
bs	bs	U he(1.1):U he(2)	U he(1.1):U he(2)
bv	bv	U hp(2)	U hp(2)
cg-2	cg-2	U hp(4)	U hp(4)
cg(2)	cg(2)	U hr	U hr
cm	cm	U hv(1)	U hv(1)
da	da	U si	U si
el	el		

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k - Insulators, suspension

ANSI Class Type	52-9 Clevis	52-1 Clevis	52-4 Clevis	52-3 Ball & Socket
Disc Diameter	4 $\frac{1}{4}$ "	6"	9" or 9 $\frac{1}{2}$ "	9" or 9 $\frac{1}{2}$ "
M & E Rating, lbs.	10,000	10,000	15,000	15,000
Leakage, inches	6-3/4	7	11 $\frac{1}{2}$	11 $\frac{1}{2}$
Flashover; kV: Dry-Wet	60 - 30	60 - 30	80 - 50	80 - 50
NOTES	(3)(4)(6)	(3)(4)	(5)	(2)

Manufacturer

Catalog Number

Chance	C907-1209	C907-1001 (6)	-	-
Gould Inc. (ITE)	877	804 (6)	-	-
Joslyn (Pinco)	L1814	L1510	L-970	L-960
Lapp	6815-G70	6605	9100	9000
Locke	16044	16583	158410	158409
Ohio Brass	42399	32433	48019	48008
Porcelain Prod. (Knox)	20034	86012	-	-
Sediver	CT-4R2	-	-	-

Notes:

- (2) To be used only on transmission lines.
- (3) To be used only on distribution lines.
- (4) Use two insulators for 7.2/12.5 kV deadends and three insulators for 14.4/24.9 kV deadends.
- (5) Use two insulators for 14.4/24.9 kV deadends.
- (6) Either malleable iron, steel or aluminum hardware is acceptable.

k-2
October 1978

k - Insulators, suspension

<u>ANSI Class</u>	52-3	52-4	52-5	52-6
<u>Type</u>	Ball & Socket	Clevis	Ball & Socket	Clevis
<u>Disc Diameter</u>	10"	10"	10"	10"
<u>M & E Rating, lbs.</u>	15,000	15,000	25,000	25,000
<u>Leakage, inches</u>	11 $\frac{1}{2}$	11 $\frac{1}{2}$	11	11
<u>Flashover; kV: Dry-Wet</u>	80 - 50	80 - 50	80 - 50	80 - 50
<u>NOTES</u>	(2)	(1)	(2)	

Manufacturer

Catalog Number

Gould Inc. (ITE)	900	800	924	815
Joslyn (Pinco)	L1060	L1070	L1500	L1570
Lapp	8200	8100	5960G	2300
Locke	20S840	20S580	30S255	30S257
Ohio Brass	32440	32439	47410	47415
Porcelain Prod. (Knox)	81022	81012	-	-

Notes: (1) Use two for 14.4/24.9 kV deadends.
(2) To be used only on transmission lines.



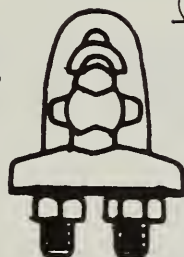
u - Deadend for galvanized steel or
alumoweld guy strand



3-Bolt Guy Clamp

	<u>Light</u> <u>(1/2" bolts)</u>	<u>Heavy</u> <u>(5/8" bolts)*</u>
Chance	6450	6461
Dixie	D6450	D6461
Joslyn	J930	J931
Kortick	K4124	K4005
McGraw-Edison	DG3C2	DG3C3
Oliver	9002	9004
Util. Service	5273	5275

U-Bolt Guy Clamp



	<u>Light</u> <u>(3/8" bolts)</u>	<u>Heavy</u> <u>(1/2" bolts)</u>
Barron Bethea	GCU-38C	-
Continental	GC-64C	GC-67C
Flagg (MIF)	PAX-64C	PAX-67C

Offset Guy Clamp

	<u>Light</u> <u>(1/2" bolts)</u>	<u>Heavy</u> <u>(5/8" bolts)</u>
Chance	6409	6410
Joslyn	J926	J927
McGraw-Edison	DG5C1	DG5C2
Oliver	9056	9057

*For use on transmission.

u-2
October 1978

u - Deadend for galvanized steel guy strand

Strand Size:	1/4"	3/8"	7/16"
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Automatic

Reliable

Bail for thimble eye	5100	5102	5103
Bail for guy insulator	5150	5152	5153



Formed Type

Chance

For standard guy	1/4 GSBG	3/8 GSBG	7/16 GSBG
For wrapped guy	1/4 GSC	3/8 GSC	7/16 GSC

Helical Line Products

For standard guy	HG-207-1/4"	HG-210-3/8"	HG-211-7/16"
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Preformed Line Products

For standard guy	GDE-1104	GDE-1107	GDE-1108
For wrapped guy	WGL-2100	WGL-2103	WGL-2104



Conditional List

v

July 1978

v - Guy attachment

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Joslyn</u>		
Pole band, with cone head	745	To obtain experience.
bolt J-6281 and guy clip	8/16/62	For distribution line.
J-6275		only and 10,000 lbs.
J-6280(for 6" to 10" pole)		maximum loading.
J-6270(for 8" to 14" pole)		

W
January 1979

W - Insulators, guy strain
(These items shall conform to "REA Specifications
for Guy Strain Insulators," D-12)

Max. Strand Dia., inches	3/8	1/2	5/8	5/8
Ult. Strength, pounds	10,000	12,000	20,000	20,000
Flashover, kV, Dry-Wet	25-12	30-15	35-18	40-23
ANSI Class	54-1	54-2	54-3	54-4

<u>Chance</u>	C909-1041	C909-1042	C909-1043	C909-1044
<u>Gould Inc. (ITE)</u>	502	504	506	556
<u>Joslyn (Pinco)</u>	L502	L504	L506	L289
<u>Locke</u>	502	504	506	7666
<u>Ohio Brass</u>	31502	31504	31506	31352
<u>Porcelain Prod. (Knox)</u>	502	504	506	708

Insulators, guy strain
(Fiber Glass)

Ult. Strength, pounds	11,000	15,000	21,000
<u>Anderson/ Sq. D</u>	GS11	GS12	GS13
<u>Barron Bethea</u>	BB-11-CC Series	BB-15-CC Series	BB-21-CC Series
<u>Continental</u>	G-11 Series	G-15 Series	G-21 Series
<u>Dixie</u>	-	GIG-15 Series	GIG-25 Series
<u>Flagg (MIF)</u>	110 Series	150 Series	210 Series
<u>Joslyn-Empire</u>	400 Series	500 Series	650 Series
<u>Kearney</u>	-	322015	322021
<u>Plastigage</u>	HS11-1P Series	HSI-2X Series	HSI3-1P Series
<u>Shakespeare</u>	-	692 Series	694 Series

z - Anchors, Power-installed screw

Manufacturer:

A. B. Chance Company
"SS" Multi Helix Anchors

Working Load Categories				
Soil Type	35,600 N (8,000 lb.)	53,400 N (12,000 lb.)	71,000 N (16,000 lb.)	89,000 N (20,000 lb.)
A ₁	12654-AE	12654-AE	12654-AEJ	12654-AEJ
Soil	12654-AEJ	12654-AEJ	12654-EJN	12654-EJN
Class 2	12654-EJN	12654-EJN	12654-EJNS	12654-EJNS
A ₂	12654-AE	12654-AE	12654-AEJ	12654-EJN
Soil	12654-AEJ	12654-AEJ	12654-EJN	12654-EJNS
Class 3	12654-EJN	12654-EJN	12654-EJNS	
B	12654-AE	12654-AEJ	12654-AEJ	12654-EJNS
Soil	12654-AEJ	12654-EJN	12654-EJN	
Classes 4 & 5	12654-EJN		12654-EJNS	
C	12654-AEJ	12654-EJN	12654-EJNS	
Soil	12654-EJN			
Classes 6 & 7				

Manufacturer:

Joslyn
"PS" Screw Anchors

Working Load Categories				
Soil Type	35,600 N (8,000 lb.)	53,400 N (12,000 lb.)	71,000 N (16,000 lb.)	89,000 N (20,000 lb.)
A ₁	J24991ACA	J24991ACA	J25534ACAB	J25534ACAB
Soil	J23381ACA	J23381ACA	J25535ACAB	J25535ACAB
Class 2	J23383ACA	J23383ACA	J25533ACAB	J25533ACAB
A ₂	J24991ACA	J24991ACA	J23381ACA	J23383ACA
Soil	J23381ACA	J23381ACA	J23383ACA	J23384ACA
Class 3	J23383ACA	J23383ACA	J23384ACA	
B	J24991ACA	J23381ACA	J23381ACA	J23384ACA
Soil	J23381ACA	J23383ACA	J23383ACA	
Classes 4 & 5	J23383ACA		J23384ACA	
C	J23381ACA	J23383ACA	J23384ACA	
Soil	J23383ACA			
Classes 6 & 7				

- NOTES: 1. See REA Specification T-10 for definitions and explanations.
2. Anchors in the 53,400 N (12,000 lb.) category or above for use on wood poles must be used with hardware commensurate with the working load. Hardware may provide for either single or multiple guy attachments to the anchor.
3. Anchors listed in a specific working load category and/or soil class may generally be used at lower working load categories and/or lower numerical soil classes.

Conditional List

Z

October 1978

Z - Anchors

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Chance</u> Screw anchors, power- installed 11B1 (6,000 & 8,000 lb., 5/8" rod) 13C1 (10,000 & 12,000 lb., 3/4" rod)	692 6/2/60	To obtain experience.
<u>Dixie</u> Screw anchors, power- installed D-1162-G (6,000 & 8,000 lb., 5/8" rod) D-1375-G (10,000 & 12,000 lb., 3/4" rod)	859 2/9/67	To obtain experience.
<u>Joslyn</u> Screw anchors, power- installed J11b CA (6,000 & 8,000 lb., 5/8" rod) J13C CA (10,000 & 12,000 lb., 3/4" rod)	973 8/19/71	To obtain experience.
<u>McGraw-Edison</u> Screw anchors, power- installed DALLG621 (6,000 & 8,000 lb., 5/8" rod)	992 5/25/72	To obtain experience.
<u>Oliver</u> Screw anchors, power- installed G-7896 (6,000 & 8,000 lb., 5/8" rod) G-7898 (10,000 & 12,000 lb., 3/4" rod)	956 12/2/70	To obtain experience.

NOTE: Where galvanized anchors are listed, the same anchors ungalvanized (black asphalt coated) are also acceptable.

ai - Rods, ground

Applicable Sizes: The standard size is 5/8 inch x 8 feet and catalog numbers listed below are for this size. Larger sizes may be required for special conditions.

Copper-covered ground rods are listed with a 13 mil minimum at any point and a 15 mil average covering of copper. All purchases should specify that a factory certification of the thickness of the copper must accompany the shipment of the rods.

Copper-covered steel rods

Boggs	EB810
Burndy	858-RGR
Carolina Galvanizing	CR-588
ITT Blackburn	6258
Joslyn	J8338
Kortick	K5428
Knight	858
Oliver	79438
Power Line Hardware	PLH-588-C
Teledyne (Penn-Union)	GR-588
UTM	858PP
Utilities Service	6617
Weaver	W588
Wilcor	WA588C

Stainless Clad Steel

<u>Manufacturer</u>	<u>5/8"</u>	<u>3/4"</u>
Joslyn	J5374	J5377
Porcelain Products	9438	9448
Teledyne (MEFCO)	"PERMAGROUND"	"PERMAGROUND"

ai-2
July 1978

ai - Rods, ground

Applicable sizes: The standard size is 5/8 inch x 8 feet and catalog numbers listed below are for this length. Longer rods may be required for special conditions.

Hot Dip Galvanized Steel

<u>Manufacturer</u>	<u>5/8"</u>	<u>3/4"</u>
Boggs	G588 PTG588**	G348 PTG348**
Burndy	G588GR	--
Carolina Galvanizing	R588	R688
Chance	8578 C203-0107**	8618 C203-0109**
Dixie	D8578	D8618
Galvan General Electric	GR6258 0982-00002	GR7508 0982-00003
Joslyn	J3358B* J5328 J5228**	J3458B* J5338 J5238**
Knight	G-588 G-588PT**	G-348 G-348PT**
Kortick	K4658	K4678
Lloyd	6258H	7508H
McGraw-Edison	DN5S8 DN8D*	DN6S8 --
Oliver	9318 49368*	9328 49378*
Porcelain Products	7338	7348
Power Line Hardware	PLH-588-GS	PLH-348-GS
Utilities Service	5307	6338
Weaver	8480G	8340G
Wilcor	WA8580G	-

Electro-Galvanized Steel

LMP	6258E**	7508E**

Stainless Steel

Joslyn	23821	23822
Teledyne (MEFCO)	TDY Sol	TDY Sol

*Rod furnished with clamp.

**Rod furnished with 4 ft., No. 6 tinned or galvanized copper pigtail.

ai - Rods, ground, sectional

Galvanized steel and
copper-covered steel

Copper-covered ground rods are listed with a 13 mil minimum at any point and a 15 mil average covering of copper. All purchases should specify that a factory certification of the thickness of the copper must accompany the shipment of the rods.

Sectional Ground Rods

<u>Manufacturer</u>	<u>8' long</u>	<u>10' long</u>	<u>Couplings</u>	<u>Driving studs</u>
Blackburn	6258S	6260S	60C	60DS
Carolina Galv.	SR588	SR510	CR58	DS58
Chance Galv. Steel	-	8512	8611	-
Joslyn Galv. Steel	J9158 J23282.8	J9160 J23282.10	J9182 J23282A	J9186 J9186
Knight	S858	S1058	SC58	DS58
Kortick	K5441	K5443	K5482	K5492
McGraw-Edison Galv. Steel	DN17S8	DN16S10	DN1K2	-
Oliver Galv. Steel	729438 9175	729440 9183	79534 9180	729534 9179
Weaver	W-588T	W-5810T	158C	358D

aj
July 1978

aj - Clamp, ground rod

<u>Manufacturer</u>	<u>For 5/8"</u> <u>Copper-</u> <u>covered Rod</u>	<u>For 3/4" Galv.</u> <u>or Stainless</u> <u>Steel Rod</u>	<u>For 5/8" Galv.</u> <u>or Stainless</u> <u>Steel Rod</u>
Anderson	GC-5	-	-
Blackburn	G5	-	-
Boggs	G31	-	-
Burndy	GKP635	-	-
C & R Products	CRGC-58	-	-
Copperweld	ABH58	-	-
Dossert	GNL62H	-	-
*Erico (Cadweld)			
1 ground wire	GR1-161G	GR1-181G	GR1-161G
2 ground wires	GR1-161G	GR1-181G	GR1-161G
Greaves/Mercury	G-580	-	-
Ilsco	GRC-58	-	-
Joslyn	J8392AB	R3459	R3459
Krueger & Hudepohl	808	-	-
Kortick	K4647	-	-
Oliver	76492	-	-
O-Z Elec. Mfg.	BG0304	-	-
Penn-Union	CEB-2	-	-
Reliable	E58	3459	3459
UTM	910-023-03	910-007-02	910-007-02
Weaver	WB5/8	-	-

*Includes disposable molds.

an - Transformers, distribution, pole type
Primary Voltages 7.2/12.5, 7.62/13.2 and 14.4/24.9 kV

	<u>7.2/12.5 & 7.62/13.2</u>	<u>14.4/24.9</u>	<u>Dual Voltage</u>
<u>General Electric</u>			
Conventional, single bushing	HS	HS	HS
Self-protected, single bushing	HSBA	HSBA	HSBA
Conventional, two bushing	HS	HS	HS

Type HS may also be obtained with internal fuse, with internal fuse and double gap, with bushing mounted cutout and double gap, and with bushing mounted cutout and arrester (Type HSCA).

<u>Howard Industries</u>			
Conventional, single bushing	REC-C	REC-C	REC-C
Conventional, two bushing	Conv-2B	Conv-2B	Conv-2B
Self-protected, single bushing	REC-P	REC-P	REC-P

<u>Kuhlman</u>			
Conventional, single bushing	I	I	I
Conventional, two bushing	B	B	B
Self-protected, single bushing	H	H	H

Type I may also be purchased with internal fuse, with internal fuse and double gap (Type G), and with bushing mounted cutout and lightning arrester (Type J).

<u>McGraw-Edison</u>			
Conventional, single bushing	G	G	GD
Self-protected, single bushing (with open-gap valve arrester)	L	L	LD
Conventional, two bushing	E	E	ED

Type G may also be obtained with internal fuse, with internal fuse and double gap, and with bushing mounted cutout and lightning arrester.

an-1.3
July 1978

an - Transformers, distribution, pole type
Primary Voltages 7.2/12.5, 7.62/13.2 and 14.4/24.9 kV

	<u>7.2/12.5 & 7.62/13.2</u>	<u>14.4/24.9</u>	<u>Dual Voltage</u>
<u>NECO</u>			
Conventional, single bushing	NC	NCH	
Self-protected, single bushing	NC-1	NCHCB	

Type NC may also be obtained with double gap and internal fuse (NC-2) and with arrester and open link fuse (NC-3).

H. K. Porter (Delta-Star)

Conventional, single bushing	OS-B3	OS-B3	OS-B3
Self-protected, single bushing	OSP-B3	OSP-B3	OSP-B3
Conventional, two bushing	OS-A	OS-A	OS-A

Types OS-B3 and OS-A may also be obtained with internal fuse.

RTE

Conventional, single bushing	1T	5T	96T & 733T
Self-protected, single bushing	230T & 234T	276T & 284T	336T & 781T
Conventional, two bushing	2T	6T & 8T	94T and 290T

Conventional single bushing type may also be purchased with external overload protection and double gap and with bushing mounted cutout and lightning arrester.

Rural Electric Supply Cooperative

Conventional, single bushing	CONV
Conventional, two bushing	CONV
Self-protected, single bushing	CSP

The single bushing transformer may also be obtained with double gap and internal fuse (Type DG) or lightning arrester and external cutout (Type COLA).

Dead-front for use in enclosure: Add "R" (Radial) or "LF" (Loop Feed) to designation

Dowzer

Conventional, single bushing	CR
Self-protected, single bushing	CSP-R
Conventional, two bushing	CD

an - Transformers, Power Single-Phase, Step-Down for Distribution Substation Use

Primary Voltage-kV	kVA Capacity												
	167	250	333	500	833	1250	1667	2500	3333	5000	6667	8333	10,000
Kuhlman													
34.4			X	X	X	X	X	X					
43.8			X	X	X	X	X	X					
67.0				X	X	X	X	X					
115													X
McGraw-Edison													
34.4	X	X	X	X	X	X	X						
43.8			X	X	X	X	X						
67.0			X	X	X	X	X						
Standard													
34.4			X	X	X								
43.8		X	X	X	X								
67.0		X	X	X	X								
Westinghouse													
34.4					X	X	X	X	X				
43.8					X	X	X	X	X				
67.0					X	X	X	X	X				
115					X	X	X	X	X				X

an - Transformers, Power
Three-Phase, Step-Down
for Distribution Substation Use

Primary Voltage-kV	kVA						MVA							
	750	1000	1500	2000	2500	3750	5	7.5	10	12	15	20	25	30
<u>Central Moloney</u>														
34.4	X	X	X	X	X	X	X	X						
43.8	X	X	X	X	X	X	X	X	X					
67.0	X	X	X	X	X	X	X	X	X	X				

General Electric

34.4	X	X		X	X	X	X	X	X	X	X	X		
43.8	X	X		X	X	X	X	X	X	X	X	X	X	
67.0	X	X		X	X	X	X	X	X	X	X	X	X	
115							X	X	X	X	X	X	X	
138							X		X	X	X	X	X	

Transformers 5 MVA and larger also accepted as load tap changing transformers using General Electric Types LR72, LR65 and LRT-200 load tap changers.

Kuhlman

34.4	X	X		X	X	X	X	X	X	X	X			
43.8				X	X	X	X	X	X	X	X	X	X	
67.0				X	X	X	X	X	X	X	X	X	X	
115							X		X	X	X	X	X	

Transformers 5 MVA and larger also accepted as load tap changing transformers using Siemens-Allis Types TLS and TLH-21 load tap changers.

an - Transformers, Power
Three-Phase, Step-Down
for Distribution Substation Use

Primary Voltage-kV	kVA						MVA							
	750	1000	1500	2000	2500	3750	5	7.5	10	12	15	20	25	30
<u>McGraw-Edison</u>														
34.4														
43.8		X		X	X	X	X	X	X	X				
67.0		X		X	X	X	X	X	X	X				
115											X			
138											X	X		

Transformers 5 MVA and larger also accepted as load tap changing transformers using McGraw-Edison Types 550, 550B and 550C load tap changers.

<u>Westinghouse</u>														
34.4		X		X	X	X	X		X				X	
43.8		X		X	X	X	X	X	X	X	X			
67.0	X	X		X	X	X	X	X	X	X	X	X	X	
115												X	X	
138											X	X	X	

Transformers 5 MVA and larger also accepted as load tap changing transformers using Westinghouse Types UTS-A, UTT-B and UVW load tap changers.

an - Transformers, Power
Single-Phase, Step-Down
for Distribution Substation Use

Condition of Acceptance: To obtain experience.

Primary Voltage-kv	<u>167</u>	<u>250</u>	<u>333</u>	<u>500</u>	<u>833</u>	<u>1250</u>	<u>1667</u>	<u>2500</u>	<u>3333</u>	<u>5000</u>	<u>6667</u>	<u>8333</u>	<u>10,000</u>
Standard													
34.4	S	S				S	S	S	X	S			
43.8	S					S	S	S	S	S			
67.0	S					S	S	S	S	S			

Conditional List
an(2.3)
January 1979

an - Transformers, Power
Three-Phase, Step-Down
for Distribution Substation Use

Condition of Acceptance: To obtain experience.

Primary Voltage-kv	kVA					MVA								
	750	1000	1500	2000	2500	3750	5	7.5	10	12	15	20	25	30
Central Moloney									S					
34.4														

Federal Pacific

34.4	S	S	S											
67.0	X								S	X	X	X	X	
115									S	X	X	X	X	X
138										X			X	X

Transformers 5 MVA and larger also accepted as load tap changing transformers using Federal Pacific
Type TC-546 load tap changers.

General Electric

34.4													S	S
43.8												S	S	S
67.0														S
115											S	S		S
138														S
Transformers 5 MVA and larger also accepted as load tap changing transformers using General Electric Types LR72, LR65 and LRT-200 load tap changers.									S					S

an - Transformers, Power
Three-Phase, Step-Down
for Distribution Substation Use

Condition of Acceptance: To obtain experience.

Primary Voltage-kV	kVA					MVA									
	750	1000	1500	2000	2500	3750	5	7.5	10	12	15	20	25	30	
Standard															
34.4					X	s	X	X	s	s					
43.8					s	X	X	s	X						
67.0					X	X	s	X	X	X	X	s			
115			X				X	X	X	X	X	X			

Transformers 5 MVA and larger also accepted as load tap changing transformers using Westinghouse Types UTS-A and UTT-B load tap changers.

Conditional List
an(3.4)
January 1979

<u>Westinghouse</u>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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Transformers 5 MVA and larger also accepted as load tap changing transformers using Westinghouse Types UTS-A, UTT-B and UVW load tap changers.

Conditional List
an(5.1)
January 1979

an - Transformers, 2:1 Ratio, Single Phase,
Autotransformers or Two-Winding Transformers
for Use in System Voltage Conversion

All transformers are warranted by the manufacturer to withstand
a short circuit of twenty-five (25) times rated current or to
be self-protecting under short circuit (SP).

Condition of Acceptance: To obtain experience.

<u>Manufacturer</u>	<u>Designation</u>	<u>Size</u>
General Electric		
2-WND	HS STEP	167-500
AUTO	HS STEP	167-1000
Westinghouse		
2-WND	"Jumbo"	167-500
H. K. Porter (Delta-Star)		
2-WND	LTD	167-500
AUTO	LTD-A	167-1000
McGraw-Edison		
2-WND	MEPS-STEP	167-1000
AUTO	MEPS-AUTO	167-1000
Howard Industries		
2-WND	STEPS	167-500

NOTE: Two-winding transformers are self-protected under external
short circuit in accordance with ANSI C57.12.90A. Auto-
transformers will withstand 25 times rated current under
external short circuit in accordance with ANSI C57.12.90A.

bj
January 1979

bj - Guy hook

Applicable Specification: Edison Electric Institute Specification TD-11
1951, "Specifications for Guy Hooks and Guy
Strain Plates"

Dixie D6584

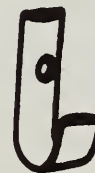
Joslyn J1019

Kortick K4031

McGraw-Edison DG4HL

Oliver 9041

Utilities Service 5310



bk
July 1978

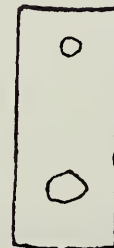
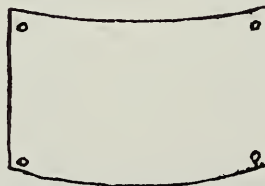
bk - Guy plate

Applicable Specifications:

Strain Type: Edison Electric Institute Specification TD-11
1951, "Specifications for Guy Hooks and Guy
Strain Plates"

Lift Type : None

	<u>Strain Type</u> <u>4" x 8" x 14 gauge</u>	<u>Lift Type</u> <u>2$\frac{1}{2}$" x 7" x $\frac{1}{4}$", 2 hole</u>
Chance	6575	7898
Dixie	D6575	D7888
Joslyn	J1034	J7894
Kortick	K4015	K3511
McGraw-Edison	DG1M2	DG4M2
Oliver	9050	6967
Power Line Hardware	GSP-1	
Utilities Service	5351	C434



br
October 1978

br - End Link

Manufacturer

Catalog Number

Gould Inc. (ITE)

3082-HT

Joslyn (Brewer-Titchener)

BT-3082-HT

Knox

3082-HT

Lapp

6415-HT

Locke

43082-HT

Ohio Brass

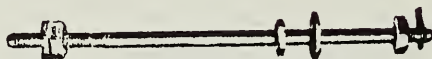
79272

bs
January 1979

bs - Bolt, single upset

Applicable Specifications: "REA Specifications for Single and
Double Upset Spool Bolts," D-5

Diameter, inches	5/8	5/8	5/8	5/8
Length, inches	7	8	9	10
Chance		7741	7741 $\frac{1}{2}$	7742
Dixie	D7740	D7741	D7741 $\frac{1}{2}$	D7742
Joslyn	-	J2342 $\frac{1}{2}$	J2343 $\frac{1}{2}$	J2344 $\frac{1}{2}$
Kortick	K4929	K4950	K4930	K4951
McGraw-Edison*	DC2E11	DC2E3	DC2E4	DC2E5
Oliver	7507	7508	7509	7510
Utilities Service	31052 $\frac{1}{2}$	31053	31053A	31054



*Static proof designs available.

bv
January 1979

bv, Rods, armor

Aluminum or aluminum alloy rods for use on ACSR

ALCOA	Straight Formed Type
Blackburn	Formed Type
Helical Line Products	Formed Type
Preformed Line Products	Formed Type
Southwire	Straight

Copperweld rods for copper or CWC conductor

Helical Line Products	Formed Type
Preformed Line Products	Formed Type

Alumoweld rods for aluminum clad steel (Alumoweld)
overhead ground wire

Helical Line Products	Formed Type
Preformed Line Products	Formed Type

Bronze rods (10 inch length) for jumper protection

Preformed Line Products	Formed Type
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bx
July 1978

bx - Splice, automatic

<u>Copper</u>	<u>Fargo</u>	<u>Reliable</u>
6	GL-111	61
4	GL-112	41
2 x 3	GL-115	-
1/0 x 7	GL-117	107
2/0 x 7	GL-118	207
3/0 x 7	GL-119	307
4/0 x 7	GL-120	407
<u>CWC</u>		
8A	GL-112	558A
6A	GL-113	556A
4A	GL-115	554A
2A	GL-117	
<u>ACSR</u>	GL-400 Series*	7650 Series*
<u>Aluminum Alloy (6201 and 5005)</u>	GL-100A Series GL-1000A Series	AL55 Series

*For use on distribution only.

cg - Switch, air, three-pole, group-operated
NEMA standard switches for station and line structures

Manufacturer	Acceptable Mounting on Structures	Tilting Ins. Type	kV	Vertical Break		Side Break		Center Break		Double Break	
				Type	kV	Type	kV	Type	kV	Type	kV
Powerdyne (Kearney)	Horizontal							V1-V4	34.5-230		
	Phase over Phase										
	Horizontal	AL-2	15-46	RVL	15-161	RG-63	15-23				
ANIXTER Royal	Horizontal	AL	15-46	RVL-61	15-230	RSL	15-161	ZAD	34.5-230		
						RSL-L(L)	15-69				
	Horizontal										
S & C	Horizontal										
	Phase over phase										
	Vertical										
Southern States	Horizontal										
	Horizontal										
Turner	Phase over phase										
	Horizontal										
USCO	Horizontal										
	Horizontal										
	Phase over phase										

(L) Means gas or solid material full-load interrupters are accepted and available.

(VL) Means vacuum full-load interrupters are accepted and available.

* These switches, except 34.5 kV Alduti vertical break, are available and accepted in combination with the S & C Type SMD substation fuse cutouts listed on page af-3.

** Also available in bronze.

NOTE: Vertical phase-over-phase mounted switches are not acceptable above 25 kV class unless equipped with full-load interrupters. Switches of 15 kV and 25 kV classes with individual phases mounted on wood crossarms must be supplied with insulated interphase and control rods.

cg - Switch, air, three-pole, group-operated

(Not suitable for substation use)

<u>Manufacturer</u>	<u>Acceptable Mounting</u>	<u>Vertical Break</u>		<u>Side Break</u>		<u>Center Break</u>	
		Type	kV	Type	kV	Type	kV

KPF	Horizontal	A202-A208		15-110			
	Phase-over-phase	A202		15-23			
	" "	W202		15-23			
	" "	MD202		15-23			

Westinghouse	Horizontal	LB-3(L)	15				
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Powerdyne (Kearney)	Horizontal Phase-over-phase	A, B, VI		15-23			
		A, VI		15-23			

(L) Means gas or solid material full-load interrupters are accepted and available.

(VL) Means vacuum full-load interrupters are accepted and available.

NOTE: Switches of 15 kV and 25 kV classes with individual phases mounted on wood crossarms must be supplied with insulated interphase and control rods.

January 1979

cg - Switch, air, three-pole, group-operated

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>H. K. Porter (cont'd.)</u>		
"Mark 40"		
115 kV thru 345 kV (horizontal upright mounting)	1005 12/7/72	To obtain experience.
Type LPV, 3-pole 72.5-272 kV, 1200 amp., 1600 amp., 2000 amp., center sidebreak for horizontal mounting	1064 5/1/75	To obtain experience.
<u>Siemens-Allis</u>		
Type AVB, 115-345 kV (Available in copper, 115- 138 kV, order Type CVB) (Horizontal upright mounting)	1027 10/11/73 1154 1/4/79	To obtain experience.
Type CBL-T, 15-69 kV 600 and 1200 amp (center break, horizontal upright mounting)	1100 10/21/76	1. To obtain experience. 2. Insulated interphase and control rods required on 15 kV and 25 kV models used on wood structures.
<u>Morgan</u>		
Type VBV (VL), horizontal upright Pole top mtg., 15-34.5 kV H-frame mtg., 46-230 kV Substation mtg., 15-230 kV	1056 1/2/75 1146 8/31/78	1. To obtain experience. 2. Pole mounted switches must be supplied with insulated interphase and control rods. (Same as above.)
Type CVB, center side-break Horizontal pole top mounting, 15-34.5 kV Phase-over-phase mounting, 15-23 kV H-frame and substation mounting, 15-230 kV	1056 1/2/75	
<u>Chance</u>		
Type D2 (L)* side break, 15-34.5 kV, (horizontal and phase- over-phase mountings)	1074 9/25/75	1. To obtain experience. 2. "Duo-Gap" expulsion interrupter required with 34.5 kV switch on phase-over-phase mounting. 3. Not to be used in sub- stations.

(L) Full-load interrupter accepted and available.

* Also available in bronze.

(VL) Means vacuum full load interrupters are accepted and available.

Conditional List
cg(3)
October 1978

cg - Switch, air, three-pole, group-operated

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Joslyn (Hi-Voltage)</u> Type RF-2 (VL), horizontal upright, vertical break, vacuum interrupter type air switch, 15-161 kV	867 5/25/67	To obtain experience.
<u>K-P-F</u> Type A202 (L) horizontal-mounted and Types A202 (L), W202 (L) and MD202 (L) phase-over-phase mounted with quick break loadbreak device.	1137 4/20/78	1. To obtain experience. 2. For 15 kV distribution lines only. 3. Insulated interphase and control rods required.

(L) Means full-load interrupter accepted and available.

(VL) Means vacuum full-load interrupters are accepted and available.

ck
July 1978

ck - Clamp, anchor rod bonding

For Standard and Drive Type Rods

<u>Diam. of Rod</u>	<u>Type of Eye</u>	<u>5/8"</u>	<u>3/4"</u>	<u>1"</u>
C & R Products	Single	CRBC-1	CRBC-1	CRBC-1
	Twin	CRBC-2	CRBC-2	CRBC-2
	Triple	-	CRBC-3	CRBC-3
Chance	Single	G5060	G5060	G5060
	Twin	G5061	G5061	G5061
	Triple	-	G5063	G5063
Dixie	Single	D3143	D3143	D3143
	Twin	-	D3144	D3144
	Triple	-	D3145	D3145
Joslyn	Single	3230	3230	3230
	Twin	-	3231	3231
	Triple	-	3233	3233
Kortick	Single	K3147	K3147	-
	Twin	-	K3148	K3148
	Triple	-	K3149	K3149
McGraw-Edison	Single	DA1B1	DA1B1	DA1B1
	Twin	DA2B1	DA2B1	DA2B1
Oliver	Single	9123	9123	9123
	Twin	-	9122	9122
Utilities Serv.	Single	CG5060	CG5060	-
	Twin	-	CG5061	CG5061
	Triple	-	CG5063	CG5063

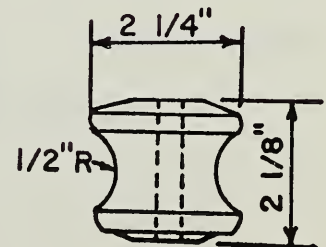
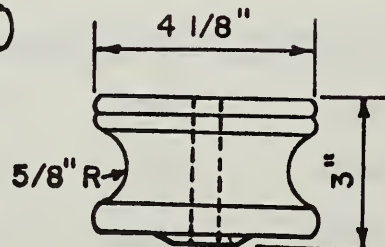
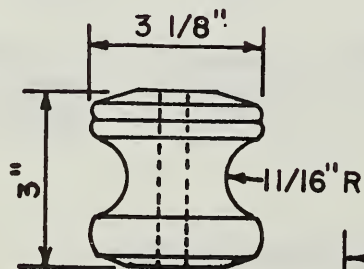
For Power Installed Screw Anchors

C & R Products	Single	CRBC-4	CRBC-5	-
Chance	Single	G5067	G5068	-
Joslyn	Single	PIBC-4	PIBC-5	-

cm
January 1979

cm - Insulator, spool

Type:	<u>Secondary (Wet Process)</u>		<u>Service</u>	
			<u>Wet Process</u>	<u>Dry Process</u>
Groove Diameter:	<u>1-3/4"</u>	<u>3"</u>	<u>1-3/8"</u>	<u>1-3/8"</u>
Chance	C909-1032	C909-1034	C909-1031	0606
Hughes	2102	-	-	-
Gould Inc. (ITE)	2012	2026	2011	-
Joslyn	J151	J0101	J150	J100
Kortick	K516	K522	K513	K514
McGraw-Edison	DE4S3	DE5S1	DE2S2	DE2S1
Oliver	2100	2104	2400	2300
Porcelain Prod. (Knox)	310	306	303W	300D
Universal	1082	-	-	-
Utilities Service	205	31221	208	207



da
January 1979

da - Bracket, insulated

	<u>Bracket without Insulator</u>	<u>Bracket with 1-3/4" Spool Insulator</u>	<u>Bracket with 3" Spool Insulator</u>
Chance	0327	0327-C909-1032	0327-C909-1034
Dixie	D0327	-	-
Joslyn	J1300	J1301	J1303
Kortick	K9278	K9081	K9082
McGraw-Edison	DC2C1	-	-
Hughes	1077LI	1077SI	1077I
Oliver	4842	24842	34842

dd
July 1978

dd - Adapter, insulator

(For adapting machine bolt to pin insulator thread)

Bolt size, inches	5/8	5/8
Insulator thread dia., In.	<u>1</u>	<u>1-3/8</u>

Manufacturer

Chance	4258	-
Joslyn	J2840	J2841
McGraw-Edison	DP1A1	DP1A2
Oliver	3256	3258

el - Sectionalizer

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>McGraw-Edison</u>		
Sectionalizer, three phase Type GN3	663 3/12/59	To obtain experience.
Sectionalizer with 125 kV BIL accessory Type GH, 15 kV single phase	1046 7/25/74	1. To obtain experience. 2. For use on single- phase taps of 14.4/24.9 kV multi- grounded wye systems.
*Sectionalizer, three phase Type GN3E 14.4 kV, 200 amp max.	1153 12/21/78	To obtain experience.
*Sectionalizer, three phase Types GV and GVC 14.4 kV, 400 amp max.	1153 12/21/78	To obtain experience.
*Sectionalizer, three phase Types GW and GWC 34.5 kV, 400 amp max.	1153 12/21/78	To obtain experience.
<u>General Electric</u>		
Sectionalizer, single-phase dry-type - 15 kV Model 9F41A with load interrupter only	910 1/23/69	1. To obtain experience. 2. Accepted ratings; 10 through 100 amperes at 15 kV max. line to ground voltage.
<u>Joslyn</u>		
Sectionalizer, three-phase, 15 kV, 400 and 600 amperes Model VBM with VT or RS control	1042 5/30/74	To obtain experience.

*NOTE: Ratings greater than 100 ampere for 7.2/12.5 kV application and greater than 200 ampere for 14.4/24.9 kV application are acceptable only with ground trip device.

em
July 1978

em - Brace, crossarm, special
(angle alley arm)

DISTRIBUTION

15" span, 14" drop; 1½" x 3/16"

Dixie	D17939
Joslyn	J1415
Kortick	K1978
McGraw-Edison	DB411
Oliver	5268
Utilities Service	5514

TRANSMISSION

	<u>2'-6" span x 1'-8" drop</u> <u>1-3/4" x 3/16"</u>	<u>3'-6" span x 2'-3" drop</u> <u>1-3/4" x 3/16"</u>
Chance	-	6999
Hughes	AS-2309-B	AS-2309-A
Joslyn	J1430	J1442
Kortick	K1975	K1976
McGraw-Edison	DB413	DB414
Oliver	5266	5267
Utilities Service	5509	5510

Conditional List
eq(1)
July 1978

eq - Narrow Profile Brackets and Special Arm Assemblies
(See REA Bulletin 61-12)

METAL BRACKETS

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Flagg (MIF)</u>		
Single post insulator bracket, P542	1032 12/20/73	1. To obtain experience.
Deadend bracket assembly, PAX188A		2. For use only in scenic areas and locations where right-of-way is limited.
Deadend bracket assembly, PAX188M for 14.4/24.9 kV construction	1044 6/27/74	
Standoff bracket, PA619H	1048 8/22/74	3. Not to be used where conductor galloping may be expected.
<u>Joslyn</u>		
Single post insulator brackets 24840.1, for 7.2/12.5 kV construction only 24840.2, for 14.4/24.9 kV construction	1043 6/13/74	(Same as above)
<u>Chance</u>		
Single post insulator brackets C206-0209 for 7.2/12.5 kV construction only C206-0010 for 14.4/24.9 kV construction	1049 9/5/74	(Same as above)
Deadend bracket assembly, C206-0179	1081	
Deadend bracket assembly, C206-0211 for 14.4/24.9 kV construction	1/8/76	
<u>Royston</u>		
Two post insulator bracket RMC-001 for 7.2/12.5 or 14.4/24.9 kV construction	1053 11/14/74	(Same as above)
<u>Continental</u>		
Standoff bracket IACB-18-5 LGE	1065 5/15/75	(Same as above)

Conditional List
eq(1.1)
January 1979

eq - Narrow Profile Brackets and Special Arm Assemblies
(See REA Bulletin 61-12)

METAL BRACKETS

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Lapp</u> Single post insulator bracket, 304031-G	1104 12/16/76	1. To obtain experience. 2. For use <u>only</u> in scenic areas and locations where right-of-way is limited. 3. Not to be used where conductor galloping may be expected.
<u>Western Power Products</u> Single post insulator bracket, HDB-200-R, for 7.2/12.5 kV construction only	1152 12/7/78	Same as above.

er
July 1978

er - Wire Guard, Plastic

See Drawing M-24

Manufacturer

Type or
Catalog No.

Chance

PFG

Fargo

GM-936

Preformed Line Products (Tree Guard)

PTG

es
January 1979

es - Splice Cover, Plastic

(For use over compression type service connections
in place of tape.)

<u>Manufacturer</u>	<u>Type</u>
Anderson	Type SEC
ITT Blackburn	Type C
Kearney	Type 601
3M	PST Series 8400
Plastic Engineering & Sales Co.	Wire Splice Cover
Virginia Plastics	Type VP

Splice Cover and Moisture Seal for
Secondary Cable Connections (See
Drawings G312 and UM5)

<u>Manufacturer</u>	<u>Type</u>
AMP	Sealing and Dielectric Compound
Bishop	Electro-Seal
3M	Scotch Brand #2200

ga - Watthour and Watthour-Demand Meters
Polyphase - 3 element - 4 wire wye - (120/208) (277/480) volt

Self-Contained Types

1 Manufacturer	2 Type of Base	3 Watthour Meter Type	4 Mechanical Demand Watthour Type	5 Thermal Demand Watthour Type	6 Number of Terminals
Duncan	Bottom Con. Socket	- MT-16S	- BMT-16S	- -	- 7
General Electric	Bottom Con. Socket	V64A V64S	VM64A VM64S	- -	- 7 or 8
Sangamo	Bottom Con. Socket	S4A S4S	S4DA S4DS	- -	- 7 or 8
Westinghouse	Bottom Con. Socket	D4-A3 D4-S3	D4A3M CS-3W	- -	- 7 or 8

Transformer Rated Types

Duncan	Bottom Con. Socket	MT-9A MT-9S or 10S	BMT-9A BMT-9S or 10S	- -	12 13
General Electric	Bottom Con. Socket	V64A V64S	VM64A VM64S	- -	- 13
Sangamo	Bottom Con. Socket	S4A S4S	S4DA S4DS	- -	- 13

Conditional List

ga(1)

January 1979

ga - Watthour and Watthour-Demand Meters

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>General Electric</u>		
Socket or bottom connected watthour and watthour-demand meters, 2.5 amp., Class 20, V-60 and VM-60 Series	907 12/5/68	1. To obtain experience. 2. To be used only where Class 20 meters are permitted by local regulatory bodies.
<u>Westinghouse</u>		
Socket or bottom connected watthour and watthour-demand meters, 2.5 amp., three element Class 20, Types D4S-3, D4S-3M, D4A3 and D4A3M, Types D4A8, D4S8, D4A8M, D4S8M, D4A2, D4S2, D4A2M and D4S2M	960 2/4/71 1089 4/29/76	1. To obtain experience. 2. To be used only where Class 20 meters are permitted by local regulatory bodies.
Socket base, 3 wire, 1Ø watthour meter, Type D4S, Class 320	1149 10/19/78	1. To obtain experience. 2. To be used only where Class 320 meters are permitted by local regulatory bodies. 3. To be used only with sockets rated for Class 320 service.
<u>Duncan</u>		
Special base, 3 wire, 1Ø watthour meter, Type MS-K, Class 400 watthour and mechanical demand Type BMS-K watthour and thermal demand Type TMS-2K	947 7/9/70 1113 4/28/77	1. To obtain experience. 2. To be used only where Class 400 meters are permitted by local regulatory bodies.
Socket base, 3 wire, 1Ø watthour meter, Type MS-E, Class 300	1113 4/28/77	1. To obtain experience. 2. To be used only where Class 300 meters are permitted by local regulatory bodies. 3. To be used only with sockets rated for Class 300 service.

January 1979

ga - Watthour and Watthour-Demand Meters

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Sangamo</u> Socket base, 3 wire 1Ø watthour meter, Type J4ES, Class 320	1103 12/2/76	1. To obtain experience. 2. To be used only where Class 320 meters are permitted by local regulatory bodies. 3. To be used only with sockets rated for Class 320 service.

Conditional List

gb(1)

July 1978

gb - Meter sockets

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Duncan</u>		
Meter mounting device	947	1. To obtain experience.
400 ampere, Type K-4# for	7/9/70	
use with Type MS-K, 1Ø	1136	2. To be used only where
Duncan meters	4/6/78	Class 400 meters are permitted by local regulatory bodies.
 Socket type HQ-4S	1136	1. To obtain experience.
4 jaws rated for	4/6/78	
Class 300 service		2. To be used only where Class 300 meters are permitted by local regulatory bodies.
 <u>Durham</u>		
M-400 ampere	1086	1. To obtain experience.
4 or 5 jaws for use	3/18/76	
with Class 10 meters		
 <u>Milbank</u>		
Type SL079-F, 4 jaws	1103	1. To obtain experience.
rated for Class 320 service	12/2/76	

#Available with UL label.

gg
January 1979

gg - Meter Protector

(This item is acceptable for use only in protection of metering installations where adequate surge protection has not been provided.)

<u>Service Voltages</u>	120/240	240 or 480	
	1-phase	3-wire, corner grounded delta	3-phase
	(350 V max.)	(650 V max.)	4-wire
			(650 V max.)
<u>Manufacturer</u>			
Delta	LA 302-S	LA 602-S	
General Electric	9L15DCB002	9L15BCB007	9L15BCC008
Joslyn	J9200-10	J9200-8	J9200-9

se
January 1979

se - Voltage Transformers

<u>Outdoor Types</u>						
<u>Manufacturer</u>	<u>.6kV</u>	<u>1.2kV</u>	<u>15kV</u>	<u>25kV</u>	<u>34.5kV</u>	<u>69kV</u>
Associated Engineering	CL TL		PTT-150 SPOF-100 PTT-110	PTT-150 SPOF-150	POF-200	
General Electric	JVA-0 JVP-0		JVW-5 JVW-110	JVW-6 ET-150 JVT-150	ET-200 JVT-200	ET-350 JVT-350
Sangamo	T6A T7		SMP-150			
Westinghouse	EMP PXA-10	EMPL	PTOM-110M PTOM-110	PTOM-150 APT-150	APT-200	APT-350 LPT-350

NOTE: The transformer types listed above are acceptable in all standard ratios. Insulation class, voltages, ratios and other necessary information should be specified when ordering.

Conditional List
se
July 1978

se - Voltage transformers

Outdoor Types

<u>Manufacturer</u>	<u>Meeting No. & Date</u>	<u>Conditions</u>
<u>Astra</u>		
Type DB, 0.6 kV	1087	To obtain experience.
Type DA, 0.6 kV	4/1/76	
<u>Electromagnetic Industries</u>		
Type ZOF-E, 46 kV	971	To obtain experience.
Type EOF-E, 46 kV	7/15/71	
Type UT-E, 46-69 kV		
Type PO4-110, 15 kV	1076	
Type PO4-150, 25 kV	10/30/75	
Type PO4-200, 34.5 kV		
Type U-450, 0.6 kV	1080(12/23/75)	

U an - Transformers, distribution
pad-mounted, dead-front

(For underground application)

Applicable Specifications: "REA Specifications for Pad-Mounted
Transformers," U-5

<u>Manufacturer</u>	<u>Single phase</u>	<u>Three Phase</u>
Central Moloney (2,4)	"REA-LP" 25-167 kVA	
Chance (2)	"Turf Hugger-R" 15-167 kVA	"Turf Hugger-R" 75-500 kVA
Dowzer (3,4)	"METRI-PAD" 25-167 kVA	"PM3W-R" 75-500 kVA
ERMCO (3,4)	"Low Profile" 10-75 kVA	
General Electric (2,4)	"Mini-Pad III - REA" 10-167 kVA	"Compad II - REA" 75-2500 kVA
Howard (2,4)	"HiPad REA" 10-167 kVA	"HiPad 3 REA" 45-2500 kVA
Kuhlman (2,4)	"Lo-Pak ALR" 25-167 kVA	
McGraw-Edison (2,4)	Series 20/30 REA 25-167 kVA	"REA Pad-Mount" 75-2500 kVA
NECO (2)	HMM-R, 10-50 kVA SP-R, 75-167 kVA	TP-R, 45-1000 kVA
H. K. Porter (2,4) (Delta-Star)	"Low Profile U 5-R" 25-167 kVA	"Porter U5-R3" 225-2500 kVA
RTE (2,4)	"REA Shrubline" 15-167 kVA	"REA Terra-Tran" 45-2500 kVA
Standard (3,4,5)	-	"Mini-Pad RE010" 75-300 kVA "Stan-Pad RE010" 500-1500 kVA
United (Ky. AEC) (2,4)	"Pad-Mount" 15-75 kVA	

- (1) 7.2/12.5 and 7.6/13.2 kV
- (2) 7.2/12.5, 7.6/13.2 and 14.4/24.9 kV
- (3) 7.2/12.5 and 7.6/13.2 kV (conditional listing for 14.4/24.9 kV)
- (4) Dual voltage - same as for 14.4/24.9 kV, single phase
- (5) Three-phase listing applies to 7.2/12.5 and 7.6/13.2 kV only

U an-1.2
January 1979

U an - Transformers, distribution,
pad-mounted, dead-front

(For underground application)

Applicable Specifications: REA Specifications for Pad-Mounted
Transformers - U-5

<u>Manufacturer</u>	<u>Single Phase</u>	<u>Three Phase</u>
VanTran (3,4)	"Mini Pad U5" 5-167 kVA	"VanPad III-U5" 30-2500 kVA
Wagner(Turbodyne) (2,4)	"Turflin II-R" 25-167 kVA	-
Westinghouse (2,4)	"Mini-Pak U-5" 25-167 kVA	CTP-U5, 75-500 kVA "Plazapad - U5" 750-2500 kVA

- (1) 7.2/12.5 and 7.6/13.2 kV.
- (2) 7.2/12.5, 7.6/13.2 and 14.4/24.9 kV.
- (3) 7.2/12.5 and 7.6/13.2 kV (conditional listing for 14.4/24.9 kV).
- (4) Dual voltage - same as for 14.4/24.9 kV, single phase.
- (5) Three-phase listing applies to 7.2/12.5 and 7.6/13.2 kV only.

U an-2
July 1978

U an - Transformers, distribution
pad-mounted, dead-front

(For unit residential underground application, 7.2/12.5
and 7.6/13.2 kV, 5-25 kVA single phase only)

<u>Manufacturer</u>	<u>Type</u>
Central Moloney	"REA-Mini-LP" 10-25 kVA
Chance	"Turf Hugger II" 10-25 kVA
ERMCO	"REA-Micro Pad" 10-25 kVA
Howard	"Spacesaver Pad" 10-25 kVA
Kuhlman	"K-Pak AKR" 10-25 kVA
McGraw-Edison	"Series 10/15 REA" 10-25 kVA
NECO	"Little NECO-R" 10-25 kVA
RTE	"Ranch Runner" 10-25 kVA
VanTran	"Mite'E'Mini" 5-25 kVA
Westinghouse	"Micro-Pak U-5" 10-25 kVA

Conditional List

U an(1)

January 1979

U an - Transformers, distribution
pad-mounted, dead-front

(For underground application)

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Hevi-Duty</u>		
Three phase	970	1. To obtain experience.
SBI-DF 750-2500 kVA	7/1/71	
7.2/12.5 & 7.6/13.2 kV	1153	2. Test reports on 750
	12/21/78	and 2000 kVA to be
		submitted as available.
<u>Westinghouse</u>		
"House-Pak U-5" dry type	984	To obtain experience.
15 and 30 kVA	2/3/72	
7.2/12.5 & 7.6/13.2 kV		

U an - Transformers, distribution, submersible

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Central Moloney</u> Type URD, 25-100 kVA	843 6/16/66	To obtain experience.
<u>General Electric</u> Type RST, 25-100 kVA	847 8/11/66	To obtain experience.
<u>Howard</u> 25-100 kVA	1139 5/18/78	To obtain experience
<u>Kuhlman</u> 25-100 kVA	901 9/12/68	To obtain experience.
<u>McGraw-Edison</u> 25-100 kVA	857 1/12/67	To obtain experience.
<u>RTE</u> "VaulTran Type H" 15-100 kVA	870 6/29/67	To obtain experience.
<u>Standard</u> Type L5-U, 10-100 kVA	1007 1/4/73	To obtain experience.
<u>Westinghouse</u> Type SPB, 25-100 kVA	843 6/16/66	To obtain experience.

Conditional List
U an(3)
January 1979

U an - Transformers, distribution,
direct burial*

(5-25 kVA only)

Conditions: To obtain experience.

Manufacturer

Metallic Tank
(Cathodic protection
required)

Nonmetallic Tank
(Cathodic protection not
used)

Central Moloney
(Meeting 993, 6/8/72)

"Trenchmite" 15 - 25 kVA
Radial Feed or Loop Feed
(same end) only

--

Sargent-Tyee
(Meeting 1016, 5/10/73)

--

"No-Korrod,"
10-25 kVA

*Direct burial transformers are at an early stage in their development. Large numbers of direct burial transformers should not be purchased from any one manufacturer by any one borrower in any one year. Careful location records should be kept.

U gk - Terminations, Outdoor
(with mounting hardware)*

(When ordering specify conductor size, type, whether
copper or aluminum, insulation diameter, and type
of mounting desired)

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Chance</u> C552-0395 Series 15 kV (#2 thru 2/0 AWG)	1058 2/6/75	To obtain experience.
<u>Raychem</u> Thermofit HVT (15, 25 and 35 kV)	1054 11/27/74	To obtain experience.
<u>Kearney</u> 111508 Series (15 kV)	1091 5/27/76	To obtain experience.
<u>Bishop</u> SWO Kit (15, 25 & 35 kV)	1109 3/3/77	To obtain experience.
<u>G & W</u> "Slip-on Dry" 15 kV, SD-7 25 kV, SD-9	1150 11/2/78	To obtain experience.

*Mounting hardware is used to attach termination to mounting bracket
(U hd or U hj).

Conditional List

U gk(2)

July 1978

U gk - Terminations, Indoor

(When ordering specify conductor size, type, whether
copper or aluminum and insulation diameter)

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Elastimold (ESNA)</u>		
Style 35-MS	945 (6/11/70)	To obtain experience.
(15, 25 and 35 kV)	1116 (6/9/77)	
<u>General Electric</u>		
Termi-Matic, Type A or G	914 (3/20/69)	To obtain experience.
(15, 25 and 35 kV)	1083 (2/5/76)	
<u>ITT Blackburn</u>		
Type SKD Stress Cone	1043	To obtain experience.
(15, 25 and 35 kV)	6/13/74	
<u>Joy</u>		
Stress Cone (15 kV)	979	To obtain experience.
	11/11/71	
<u>Raychem</u>		
Thermofit HVT	1054	To obtain experience.
(15, 25 and 35 kV)	11/27/74	
<u>3M</u>		
MT Series	1054 (11/27/74)	To obtain experience.
(15, 25 and 35 kV)	1083 (2/5/76)	
<u>Kearney</u>		
1115 SC Series	1091	To obtain experience.
(15 and 25 kV)	5/27/76	
<u>Bishop</u>		
Stress-Wrap	1109	To obtain experience.
(15, 25 & 35 kV).	3/3/77	

U gv
October 1978

U gv - Stake, power pedestal
Refer to Construction Drawing UK5

<u>Manufacturer</u>	<u>Length Inches</u>	<u>Catalog No.</u>	
		<u>For power pedestal only</u>	<u>For joint pedestal</u>
Fargo	72-78-84	UP-5300G-S Series	UP-530G-J Series
Nordic	48-60-72	PM Series	

Conditional List
 U hb(1)
 January 1979

U hb - Cable Accessories

(When ordering specify conductor size, type, whether
 copper or aluminum and insulation diameter)

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Blackburn, ITT</u>		
15 kV, used with		To obtain experience.
loadbreak connectors		
Type LB2BA bushing plug		
Type ABOC protective cap	1012 (3/15/73)	
Type JLB2BA bushing plug*		
25 kV, used with non-	1042 (5/30/74)	
loadbreak connectors		
Type LB2CA bushing plug	1110 (3/17/77)	
Type ABOCC protective cap		
<u>Burndy</u>		
15 kV, used with	1019	To obtain experience.
loadbreak connectors	6/21/73	
Type LBP82 bushing plug		
Type LBPC82-11 insulating cap		
<u>Elastimold (ESNA)</u>		
15 kV, used with		
loadbreak connectors		
Style 1601-CL cable lead	921 (6/26/69)	To obtain experience.
Style 1601-A2 bushing plug	" "	
Style 1601-A3 bushing plug*	1068 (6/26/75)	
Style 160-DR insulating cap	924 (8/7/69)	
15 kV, used with non-loadbreak		
connectors	921	
Style 1501-A1 bushing plug	6/26/69	
Style 150-DP deadend plug	842	
Style 150-DR deadend receptacle	6/2/66	
25 kV, used with loadbreak		
connectors	964	
Style 2701-A1 bushing plug*	4/8/71	
25 kV, used with non-loadbreak		
connectors	921	
Style K-1501-A1 bushing plug	6/25/69	
Style K-150-DR deadend receptacle	945	
	6/11/70	

*Note: Asterisk indicates single or three phase. Other bushing plugs for use
 with loadbreak connectors are single phase only.

U hb - Cable Accessories

(When ordering specify conductor size, type, whether
copper or aluminum and insulation diameter)

600 Ampere Continuous Current Rating

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Elastimold (ESNA)</u>		
15 kV, used with non-loadbreak connectors 600, 650 Series	1016 5/10/73	To obtain experience
25 kV, used with non-loadbreak connectors K600, K650 Series		
35 kV, used with non-loadbreak connectors 750LR Series	1064 5/1/75	
<u>RTE</u>		
15 kV, VBT Tee connector No. 2604360B Series	1126 11/3/77	To obtain experience.
15 kV, Protective cap No. 2625041A01		
<u>ITT Blackburn</u>		
15 kV, used with non-loadbreak connectors Types 6B and 65B	1131 1/19/78	To obtain experience.
25 kV, used with non-loadbreak connectors Types 6C and 65C		

U hc
January 1979

U hc - Cable Supports
15 and 25 kV

<u>Manufacturer</u>	<u>Catalog Number</u>	<u>Grip Dia. Range (inches)</u>
Kellems	022-16-011	0.81 to 0.94
	022-16-012	0.87 to 1.00
	022-16-013	0.94 to 1.06
	022-16-014	1.00 to 1.18
	022-16-015	1.06 to 1.25
	022-01-018	1.25 to 1.50
Lewis	A-U-SW-18	0.75 to 1.25
Economy Cable Grip	SPJ087-U	0.87 to 1.00
	SPJ100-U	1.00 to 1.12
	SPJ113-U	1.12 to 1.25
	SPC125-S-U	1.25 to 1.50
Fargo	GJ-854	0.718 to 0.919
	GJ-855	0.920 to 1.12
	GJ-856	1.12 to 1.50
Aluma-Form	CS-800 Series	0.75 to 2.0
Woodhead	36170 (SC14)	0.81 to 0.95
	36171 (SC15)	0.89 to 1.01
	36172 (SC16)	0.94 to 1.07
	36173 (SC17)	1.00 to 1.19
	36174 (SC18)	1.06 to 1.26
	35034 (SC125U)	1.25 to 1.50
Slater	FCSD 14	0.82 to 0.95
	FCSD 15	0.88 to 1.00
	FCSD 16	0.95 to 1.06
	FCSD 17	1.01 to 1.19
	FCSD 18	1.07 to 1.26
	FC125-U	1.25 to 1.50

U he - Enclosures, Sectionalizing Equipment

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
	<u>7.2/12.5 kV</u>	
<u>McGraw-Edison</u> EH3A Series, single- phase, pad-mounted	1065 5/15/75	To obtain experience.
<u>Malton</u> MEF21	1108 2/17/77	To obtain experience.
<u>S & C</u> Mark III, Models PMS (with option G-5) and PMC (with option G-5) 200 ampere three-pole switching and 200 ampere single-pole switching	1112 4/14/77	To obtain experience.
<u>Westinghouse</u> UTE, PAD-PAK pad-mounted switching device, single and three-phase, 300 amp	1151 11/16/78	To obtain experience.

NOTE 1: Enclosures on this page must comply with the deadfront requirements of REA Spec. U-7.

NOTE 2: Single-pole switching of three-phase underground circuits may cause ferroresonance. Refer to REA Bulletin 61-3.

Conditional List
U he(2)
January 1979

U he - Enclosures, Sectionalizing Equipment

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
	<u>14.4/24.9 kV</u>	
<u>Elliott</u> Type EPMR, single- and three-phase, pad-mounted	1030 11/21/73	To obtain experience.
<u>Gerard</u> Mod-Brk 6-125 and 6-325 Series, single- and three-phase pad-mounted	1047 8/8/74	To obtain experience.
<u>Powercon</u> Type PMF, single-phase pad-mounted Type PMF, three-phase pad-mounted	998 8/17/72	To obtain experience.
<u>RTE</u> Type LBS, single- and three-phase, pad- mounted, 300 amp	1095 8/11/76	To obtain experience.
<u>S & C</u> Mark III, Model PMC (with option G-5) 200 ampere single-pole switching	1112 4/14/77	To obtain experience.
<u>Inter-Alloys</u> Uni-Versal single- and three-phase pad-mount fusible switchgear and loadbreak switches Series UV-FL	1133 2/16/78	To obtain experience.
<u>Westinghouse</u> UTE, PAD-PAK pad-mounted switching device, single and three-phase, 200 amp	1151 11/16/78	To obtain experience.

NOTE 1: Enclosures on this page must comply with the dead-front requirements of REA Specification U-7.

NOTE 2: Single-pole switching of three-phase underground circuits may cause ferroresonance. Refer to REA Bulletin 61-3.

U hp - Terminations, Elbow*

(When ordering specify conductor size, type, whether
copper or aluminum and insulation diameter)

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Burndy</u>		
15 kV, Loadbreak		
LBT 112 (without test point)	1144	To obtain experience.
LBT 112-T (with test point)	8/3/78	
15 kV, Fused	969	
SPF-TPK	6/17/71	
25 kV, Non-loadbreak	1145	
LBT 252 (without test point)	8/17/78	
LBT 252-T (with test point)		
<u>Elastimold (ESNA)</u>		
15 kV	945	To obtain experience.
Style 154-LR (non-loadbreak with voltage test point)	6/11/70	
Style 163-LR (Loadbreak without voltage test point)		
Style 164-LR (Loadbreak with voltage test point)		
25 kV	945	
Style K-154-LR (non-loadbreak with voltage test point)	6/11/70	
Style 271-LR (Loadbreak without voltage test point)	1068	
Style 272-LR (Loadbreak with voltage test point)	6/26/75	
35 kV		
Style 354-LR (non-loadbreak with voltage test point)	1064 5/1/75	

*NOTE: Non-loadbreak devices require that connections be made in non-energized conditions only.

For application of loadbreak elbows on three-phase systems, refer to
REA Bulletin 61-15 dated June 1974.

Conditional List
U hp(2)
January 1979

U hp - Terminations, Elbow*

(When ordering specify conductor size, type, whether
copper or aluminum and insulation diameter)

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>General Electric</u>		
15 kV, Loadbreak	930	To obtain experience.
Elbow connector module	10/30/69	
9U01 Series		
25 kV	1016	
9U01BAA Series (Loadbreak with voltage test point)	5/10/73	
9U01BBA Series (Loadbreak without voltage test point)		
<u>ITT Blackburn</u>		
15 kV, Loadbreak	981(12/16/71)	To obtain experience.
T2B (without test point)		
T2BT (with test point)	981(12/16/71)	
15 kV, Non-loadbreak	1037	
TN2BT (with test point)	3/21/74	
25 kV, Non-loadbreak		
T2CT (with test point)		
TN2CT (with test point)		
<u>Joy</u>		
15 kV, Loadbreak with voltage test point	1000 9/14/73	To obtain experience.
Break safe terminator		
25 kV Loadbreak		
X8975 Series (with test point)	1091	
C8975 Series (without test point)	5/27/76	

*NOTE: Non-loadbreak devices require that connections be made in non-energized conditions only.

For application of loadbreak elbows on three-phase systems, refer to
REA Bulletin 61-15 dated June 1974.

U hp - Terminations, Elbow*

(When ordering specify conductor size, type, whether
copper or aluminum and insulation diameter)

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Kearney</u>		
15 kV		
1115-FC Series (Loadbreak with voltage test point)	1077 11/13/75	To obtain experience.
25 kV		
1125 Series - L1 (Loadbreak without voltage test point)	1001 9/28/72	
1125 Series - L2 (Loadbreak with voltage test point)	966 5/6/71	
<u>RTE</u>		
15 kV Loadbreak SBT IV	1122	To obtain experience.
2604000B Series with test point	9/8/77	
2603999B Series without test point		
15 kV Non-loadbreak	1148	
2625166B Series	9/28/78	
2625175B Series		
2525175B Series		
25 kV Loadbreak SBT	1032	
2604381B Series with test point	12/20/73	
2604400B Series without test point		
35 kV Loadbreak SBT	1048	
2603922B Series with test point	8/22/74	
2604006B Series without test point		

*NOTE: Non-loadbreak devices require that connections be made in non-energized conditions only.

For application of loadbreak elbows on three-phase systems,
refer to REA Bulletin 61-15 dated June 1974.

Conditional List

U hp(4)

January 1979

U hp - Terminations, Elbow
(Rated for switching on three-phase systems)

(When ordering specify conductor size, type, whether
copper or aluminum and insulation diameter)

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Kearney</u>		
15 kV, Loadbreak with voltage test point 1115-FC Series	1005 12/7/72 1077 11/13/75	To obtain experience.
<u>RTE</u>		
15 kV, Loadbreak SBT IV 2604600B Series with test point 2604599B Series without test point	1032 12/20/73 1122 9/8/77	To obtain experience.
25 kV, Loadbreak SBT 2604740B Series with test point 2604741B Series without test point	1148 9/28/78	
<u>Elastimold (ESNA)</u>		
15 kV, Loadbreak without voltage test point Style 165-LR	1068 6/26/75	To obtain experience.
15 kV, Loadbreak with voltage test point Style 166-LR		
25 kV, Loadbreak without voltage test point Style 271-LR		
25 kV, Loadbreak with voltage test point Style 272-LR		
<u>General Electric</u>		
15 kV, Loadbreak 9U01A--4-- Series	1133 2/16/78	To obtain experience.
25 kV, Loadbreak 9U01B--5-- Series		
<u>ITT Blackburn</u>		
15 kV, Loadbreak JT2B (without test point)	1054 11/27/74	To obtain experience.

U hr
January 1979

U hr - Secondary tap or splice cover, submersible

<u>Manufacturer</u>	<u>Type or Catalog No.</u>
Bishop	Splice-Wrap
Blackburn	Type DBS
Elastimold (ESNA)	Style 86
Homac	FSS Series
Kearney	Aqua-Seal Kit
3M	PST Series 8400

Heat Shrink Tubing (with sealant throughout)

<u>Manufacturer</u>	<u>Type or Catalog No.</u>
AMP	Black heat-shrink tubing
Electrical Spec. Prod.	HSB
Raychem	WCS cable sleeves
Sigmaform Corporation	Sigmaform heat-shrinkable products

U hv-1
July 1978

U hv - Cable, underground
15 kV cable

Applicable Specification: REA Specification U-1
Conductor : Copper or Aluminum
 #2 AWG through 1000 kcmil
Insulation : High Molecular Weight (HMW) or cross-
 linked (XL) polyethylene
Neutral : Coated copper concentric neutral

<u>Manufacturer</u>	<u>Insulation</u>	<u>Flat Strap Neutral Available</u>	<u>Stabilized Neutral Design*</u>
Alcan	HMW or XL	Yes	
Alcoa	HMW or XL	Yes	Ridg-lok
Anaconda	HMW	No	
Collyer	XL	No	
Cyprus (Rome)	HMW or XL	Yes	Serve-Lock
Essex (Paranite)	HMW or XL	Yes	
Hatfield	XL	No	
Hendrix	HMW or XL	No	Neu-Lok
Kaiser	HMW or XL	No	
Okonite	HMW or XL	No	
Phelps Dodge	HMW or XL	Yes	
Pirelli	HMW or XL	Yes	
Reynolds	HMW or XL	Yes	Secure-Neutral
Southwire	HMW or XL	No	
Triangle	HMW or XL	Yes	

* Accepted design meeting the requirements of 7.5.2 REA Specification U-1,
for a minimum neutral with a maximum lay.

U hv - Cable, underground

600 volt multi-conductor cable

Applicable Specification: REA Specification U-2
 Conductor : Copper, #4 AWG and larger
 Insulation : Aluminum, #2 AWG and larger
 : Cross-linked polyethylene (XLPE)

<u>Manufacturer</u>	<u>Type Insulation</u>	<u>Type Conductor</u>	<u>Cable Configuration</u>
Alcan	XLPE	Copper or Aluminum	3 insulated conductors triplexed
Alcoa	XLPE	Aluminum	3 insulated conductors triplexed
American Electrical	XLPE	Aluminum	3 insulated conductors triplexed
Anaconda	XLPE	Copper or Aluminum	3 insulated conductors triplexed
Cyprus (Rome)	XLPE	Copper or Aluminum	3 insulated conductors triplexed
Essex (Paranite)	XLPE	Copper or Aluminum	3 insulated conductors triplexed
General Electric	XLPE	Copper or Aluminum	3 insulated conductors triplexed
Hatfield	XLPE	Copper	3 insulated conductors triplexed
Kaiser	XLPE	Aluminum	3 insulated conductors triplexed
Okonite	XLPE	Copper or Aluminum	3 insulated conductors triplexed
Pirelli	XLPE	Copper or Aluminum	3 insulated conductors triplexed
Reynolds	XLPE	Copper or Aluminum	3 insulated conductors triplexed
Southwire	XLPE	Copper or Aluminum	3 insulated conductors triplexed
Triangle	XLPE	Copper or Aluminum	3 insulated conductors triplexed

NOTE: The above cable may be supplied with UL label for Type USE.

U hv-4
 July 1978

Conditional List
U hv(1)
January 1979

U hv - Cable, Underground
(15 or 25 kV cable)

TREE RETARDANT

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Reynolds</u> Reynotree HMW	1114(5/12/77)	To obtain experience.
DFDA-6202 HMW	1134(3/2/78) 1151(11/16/78)	
<u>Alcoa</u> Treban 100 HMW	1144(8/3/78)	To obtain experience.
DFDA-6202 HMW	1148(9/28/78)	
<u>Cyprus</u> Treban 100 HMW	1146(8/31/78)	To obtain experience.
<u>Essex</u> Treban 100 HMW	1146(8/31/78)	To obtain experience.
<u>Southwire</u> Treban 100 HMW	1146(8/31/78)	To obtain experience.
DFDA-6202 HMW	1152(12/7/78)	
<u>Triangle</u> Treban 100 HMW	1146(8/31/78)	To obtain experience.
DFDA-6202 HMW	1151(11/16/78)	
<u>Hendrix</u> DFDA-6202 HMW	1151(11/16/78)	To obtain experience.
<u>Pirelli</u> Treban 100 HMW	1152(12/7/78)	To obtain experience.
DFDA-6202 HMW	1152(12/7/78)	

Conditional List

U sd
July 1978

U sd - Current Transformers

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Sangamo</u> Current transformers, direct burial, 600 v. Type KU-6 Type K2U-6 Type GU-6 Type HU-6	940 4/2/70	To obtain experience.

U si
January 1979

U si - Anodes, Sacrificial
(Drawings UML1-1, UM-26, UM27, M2-7)

Zinc Anodes*

	<u>Pre-Packaged With Connecting Wire</u>			<u>Bare Continuous Strip (Ribbon)</u>	
	5/4 kg (12 lbs)	13.6 kg (30 lbs)	27.2 kg (60 lbs)	16 mm x 22 mm (5/8" x 7/8")	13 mm x 14 mm (1/2" x 9/16")
Federated Metals	S-12 packaged	S-30 packaged	S-60 packaged	Regular size Type II	Junior size
Harco	AZC12GJ	AZC30GJ	AZC60HJ		

Magnesium Anodes**

	<u>Standard Potential</u>			<u>High Potential</u>		
	7.7 kg (17 lbs)	14.5 kg (32 lbs)	22.7 kg (50 lbs)	7.7 kg (17 lbs)	14.5 kg (32 lbs)	21.8 kg (48 lbs)
Federated Metals	17 packaged	32 packaged	50 packaged			
Harco	AMC17J	AMC32J	AMC50J	AMC17G	AMC32G	AMC48G
Kaiser Mag.	17 Vibra Pak	32 Vibra Pak	50 Vibra Pak	17 Electromag Vibra Pak	32 Electromag Vibra Pak	50 Electromag Vibra Pak

*When ordering, specify zinc anodes that meet ASTM B418-73 Type II Composition and REA Specification DT-9, "REA Specification for Zinc Sacrificial Anodes."

**When ordering, specify magnesium anodes that meet REA Specification DT-10, "REA Specification for Magnesium Sacrificial Anodes."